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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/308,914	11/18/1999	MARTIN HERKLOTZ	2565/52	6832

26646 7590 12/18/2002

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EXAMINER

FREAY, CHARLES GRANT

ART UNIT	PAPER NUMBER
3746	

DATE MAILED: 12/18/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/308,914	HERKLOTZ ET AL.
	Examiner Charles G Freay	Art Unit 3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 23 October 2002.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 20-47 is/are pending in the application.

4a) Of the above claim(s) 27,28,37-43,46 and 47 is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 20-26,29-31,33-36,44 and 45 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 18 November 0299 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:

- Certified copies of the priority documents have been received.
- Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
- Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>6</u> .	6) <input type="checkbox"/> Other: _____

## DETAILED ACTION

### *Election/Restrictions*

Applicant's election with traverse of species 1 in Paper No. 9 is acknowledged. The traversal is on the ground(s) that each of the species include a pumping unit, a hydraulic unit and a membrane unit bordering a first chamber and in the second species the space between the layers does not form a hydraulic unit. This is not found persuasive because the piston 7 of species 2 is directly connected to the layer 1' by the end piece 50, if the interspace does not form a hydraulic unit then this species has no hydraulic unit and therefore species are different because one species has a hydraulic unit and the other does not. If the interspace does form a hydraulic unit then the species are different for the reasons set forth in the first office action.

The requirement is still deemed proper and is therefore made FINAL.

### *Drawings*

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the control unit and its connections, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

***Claim Objections***

Claim 35 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 35 depends from canceled claim 1.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 20-25, 29, 31, 33 and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Schrenker (USPN 4,624,625).

Schrenker discloses a membrane unit (unnumbered), a pumping unit (11), a hydraulic unit (the open connection between the pump and membrane units), a measuring devise (17); and a control unit for controlling the pump based on signals from the measuring devise. There is also a hydraulic sensor (29) which measures the pressure of the fluid within the hydraulic unit.

Claims 20-26, 29, 33 and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Vincent (USPN 5,074,755).

Vincent discloses a pump having a piston pump unit (18), a membrane unit (11), a hydraulic unit (the open connection between the pump and membrane units, a measuring unit (48) which measures the displacement of the pump piston and sends a signal to a controller (50) which then controls the pump. The unit is arranged on a chassis (10).  
74,45

Claims 20-25, 29, 33 and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Chesnut (USPN 3,428,042).

Chesnut discloses a pump having a piston pump unit (18), a membrane unit (20), a hydraulic unit (19), a measuring unit (55) which measures the displacement of the pump piston (57) and sends a signal to a controller (11) which then controls the pump.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 30 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over each of Schrenker, Vincent or Chesnut.

As set forth above the references disclose the invention substantially as claimed but do not disclose the controllers calculating the volume, metering or delivery rates for the pump. Since the controllers are already calculating parameters related to the instantaneous displacements and flow rates it would have been obvious to one of ordinary skill in the art to some these parameters to get total flows and rates of flow for the pump and thus give the operator information relating to how much material to pump has displaced over time.

Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chesnut in view of Van Bork (USPN 5,249,932).

As discussed in the above rejections Chesnut discloses the invention substantially as claimed but does not disclose that the hydraulic unit (73) has a vent valve. Van Bork discloses a diaphragm (11) pump. The diaphragm being driven by a piston pump (26) connected to the diaphragm unit by a hydraulic unit. The hydraulic unit has a vent valve (21). At the time of the invention it would have been obvious to one of ordinary skill in the art to use a vent valve (21) as taught by Van Bork in the Chesnut reference in order to prevent damage in the event of an over pressurization.

***Allowable Subject Matter***

Claim 32 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Mikulski and Maier et al disclose pump driven diaphragm pumps.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles G Freay whose telephone number is (703)308-0639. The examiner can normally be reached on Monday through Friday 10:00 A.M. to 5:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Thorpe can be reached on (703)308-0102. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9302 for regular communications and (703)872-9303 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0861.



Charles G Freay  
Primary Examiner  
Art Unit 3746

CGF  
December 14, 2002